

CHAPTER VI PAVEMENT STRUCTURE DESIGN

Specification Item No.	Description	Factor
PLANT MIX BITUMINOUS BASE COURSE		
301-60.____	Asphalt Cement (Bituminous Base)	0.112 Mg/m ³ of Compacted Mixture
301-20.05	Mineral Aggregate (Bituminous Base)	2.268 Mg/m ³ of Compacted Mixture
AGGREGATE BASE COURSE		
304-00.____	Type 1 or Type 2 Aggregate for Base	2.492 Mg/m ³ Compacted
304-04.____	Type 4 Aggregate for Base	2.219 Mg/m ³ Compacted
	Total Weight of Base Material at Optimum Moisture Content	
AGGREGATE SURFACE		
310-____	Gravel, Crushed Stone and Chat	0.00167 Mg/m ² /mm or 0.001 m ³ /m ² /mm (Based on 1.661 Mg/m ³ of loose Aggregate)
PLANT MIX BITUMINOUS PAVEMENT		
401-____	Asphalt Cement, (Bituminous Pavement)	0.125 Mg/m ³ of Compacted Mixture
401-20.____	Mineral Aggregate (Bituminous Pavement)	2.233 Mg/m ³ of Compacted Mixture
PLANT MIX BITUMINOUS SURFACE LEVELING		
402-____	Asphalt Cement, (Surface Leveling)	
402-15.10	Mineral Aggregate (Surface Leveling) (Obtain Factors from Division of Maintenance and Traffic)	
ASPHALTIC CONCRETE PAVEMENT		
403-____	Asphalt Cement (Asphaltic Concrete) (Type A Mix)	0.121 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type A Mix)	2.209 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type IB Mix)	0.102 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type IB Mix)	2.268 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type IC Mix)	0.113 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type IC Mix)	2.226 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type LP Mix)	0.116 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type LP Mix)	2.283 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type LS Mix)	0.127 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type LS Mix)	2.463 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP125 Mix)	0.135 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP125 Mix)	2.202 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP190 Mix)	0.129 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP190 Mix)	2.217 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP250 Mix)	0.109 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP250 Mix)	2.307 Mg/m ³ of Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SMA Mix)	0.150 Mg/m ³ of Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SMA Mix)	2.230 Mg/m ³ of Compacted Mixture
ROAD MIX BITUMINOUS PAVEMENT		
405-10.____	Liquid Asphalt (Road Mix)	53 L/Mg of Aggregate
405-25.____	Aggregate	2.136 Mg/m ³ of Compacted Mixture
405-10.____	Liquid Asphalt (Road Mix)	89 L/m ³ of Loose Aggregate
405-25.____	Aggregate	1.29 m ³ /m ³ of Compacted Mixture

Estimate Factors

METRIC**CHAPTER VI
PAVEMENT STRUCTURE DESIGN**

		TACK COAT	
407-10.00	Tack		0.225 L/m ²
		PRIME COAT	
408-20.____	Prime		1.7 L/m ² (Aggregate Base) 1.1 L/m ² (Color Coat)
408-30.00	Sanding Primer		0.0018 m ³ /m ²
		SEAL COAT	
409-15.05	Bituminous Material (seal coat)		1.7 L/m ²
409-25.____	Cover Aggregate		0.015 Mg/m ²

NOTE: These factors are estimates and deviation from them may be made if specific job conditions warrant using other factors. Mix designs have been established for most rock formations and the designer should request specific factor recommendations from the District Materials Engineer.

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Specification Item No.	Description	Factor
PLANT MIX BITUMINOUS BASE COURSE		
301-60.____	Asphalt Cement (Bituminous Base)	0.094 Ton/yd ³ Compacted Mixture
301-20.00	Mineral Aggregate (Bituminous Base)	1.911 Ton/yd ³ Compacted Mixture
AGGREGATE BASE COURSE		
304-00.____	Type 1 or Type 2 Aggregate for Base	2.10 Tons/yd ³ Compacted
304-04.____	Type 4 Aggregate for Base	1.87 Tons/yd ³ Compacted
	Total Weight of Base Material at Optimum Moisture Content	
AGGREGATE SURFACE		
310-____	Gravel, Crushed Stone and Chat	0.039 Ton/yd ² /inch or 0.028 yd ³ /yd ² /inch (Based on 1.40 Tons/yd ³ of loose Aggregate)
PLANT MIX BITUMINOUS PAVEMENT		
401-____	Asphalt Cement, (Bituminous Pavement)	0.105 Ton/yd ³ Compacted Mixture
401-20.____	Mineral Aggregate (Bituminous Pavement)	1.882 Ton/yd ³ Compacted Mixture
PLANT MIX BITUMINOUS SURFACE LEVELING		
402-____	Asphalt Cement, (Surface Leveling)	
402-20.10	Mineral Aggregate (Surface Leveling) (Obtain Factors from Division of Maintenance and Traffic)	
ASPHALTIC CONCRETE PAVEMENT		
403-____	Asphalt Cement (Asphaltic Concrete) (Type A Mix)	0.102 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type A Mix)	1.862 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type IB Mix)	0.086 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type IB Mix)	1.911 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type IC Mix)	0.095 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type IC Mix)	1.876 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type LP Mix)	0.098 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type LP Mix)	1.924 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type LS Mix)	0.107 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type LS Mix)	2.076 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP125 Mix)	0.114 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP125 Mix)	1.856 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP190 Mix)	0.109 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP190 Mix)	1.868 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SP250 Mix)	0.092 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SP250 Mix)	1.944 Ton/yd ³ Compacted Mixture
403-____	Asphalt Cement (Asphaltic Concrete) (Type SMA Mix)	0.126 Ton/yd ³ Compacted Mixture
403-____	Mineral Aggregate (Asphaltic Concrete) (Type SMA Mix)	1.879 Ton/yd ³ Compacted Mixture
ROAD MIX BITUMINOUS PAVEMENT		
405-10.____	Liquid Asphalt (Road Mix)	12.8 Gal/Ton of Aggregate
405-20.____	Aggregate	1.80 Ton/yd ³ Compacted Mixture
405-10.____	Liquid Asphalt (Road Mix)	18 Gal/yd ³ Loose Aggregate
405-20.____	Aggregate	1.29 yd ³ Loose/yd ³ of Comp. Mixture

Estimate Factors

Figure 6-07.1

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		TACK COAT	
407-10.05	Tack		0.05 Gal/yd ²
		PRIME COAT	
408-10.____	Prime		0.35 Gal/yd ² (Aggregate Base)
			0.25 Gal/yd ² (Color Coat)
408-20.00	Sanding Primer		0.002 yd ³ /yd ²
		SEAL COAT	
409-10.05	Bituminous Material (seal coat)		0.35 Gal/yd ²
409-20.____	Cover Aggregate		0.0125 Ton/yd ²

NOTE: These factors are estimates and deviation from them may be made if specific job conditions warrant using other factors. Mix designs have been established for most rock formations and the designer should request specific factor recommendations from the District Materials Engineer.